First report of the surveillance working group of the Federal Commission for Sexual Health

Kübler, Daniel ; Low, Nicola ; Brunold, Herbert ; Capol, Sevend ; Elford, Jonathan ; Hughes, Gwenda ; Lo, Ying-Ru ; Rosenbrock, Rolf ; Frey, Kathrin ; Salamina, Amanda

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First Report of the Surveillance Working Group of the Federal Commission for Sexual Health

Daniel Kübler, Nicola Low, Herbert Brunold, Svend Capol, Jonathan Elford, Gwenda Hughes, Ying-Ru Lo, and Rolf Rosenbrock

In collaboration with

Kathrin Frey and Amanda Salamina

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Surveillance Working Group of the Federal Commission for Sexual Health
Scientific secretariat
Dr. Kathrin Frey
University of Zurich, Department of Political Science
Affolternstrasse 56, 8050 Zürich
Tel. 044 634 52 09
Email: kfrey@ipz.uzh.ch

1 Introduction

1.1 Appointment, mandate and members of the Surveillance Working Group

The Federal Commission for Sexual Health (FCSH) appointed the Surveillance Working Group in March 2012. The FCSH has mandated the Surveillance Working Group to assess and interpret existing evidence on HIV and other STI in Switzerland from an independent and international standpoint. The Surveillance Working Group aims to strengthen the evidence base for the HIV/STI policy. Its main goals are:

- Quality assessment and further improvement of HIV/STI surveillance and evaluation.
- Promotion of quality and innovation in the field of HIV/STI surveillance and evaluation.
- Promotion of evidence dissemination and utilization.

In this way, the Surveillance Working Group supports the FCSH and the Federal Office of Public Health (FOPH) in achieving the fourth main goal of the National Programme on HIV and other STI (NPHS) 2011-2017 (FOPH 2010).[1]

The Surveillance Working Group is co-chaired by two members of the FCSH: Prof. Dr. Daniel Kübler, Department of Political Science, University of Zurich, and Prof. Dr. Nicola Low, Institute of Social and Preventive Medicine, University of Bern. The further Working Group members are Herbert Brunold, Head of the Section Evaluation and Research, FOPH, Dr. Svend Capol, Cantonal Chief Medical Officer of the Canton Schwyz and member of the FCSH, Prof. Dr. Jonathan Elford, holding the chair in evidence-based healthcare at City University London, Dr. Gwenda Hughes, Consultant Healthcare Scientist in the Department of HIV & STIs at the Health Protection Agency (HPA) London, Dr. Ying-Ru Lo, WHO Regional Office for the Western Pacific Region Manila, and Prof. Dr. Rolf Rosenbrock, Professor for Health Policy at the Berlin School of Public Health and Member of the National Advisory Board on Aids in Germany.[2]

Scientific and logistic support for the Surveillance Working Group is provided by scientific staff (Dr. Kathrin Frey and Amanda Salamina) based at the Department of Political Science of the University of Zurich and supervised by Prof. Dr. Daniel Kübler.

1.2 Meetings and Topics discussed in 2012

The Surveillance Working Group met in 2012 for two full-day meetings, the constituent meeting on the 20th of March and the second meeting on the 30th of October 2012.[3] In between the Working Group initiated and co-organised the first Data Triangulation Workshop for key actors that either collect and analyse HIV/STI surveillance data or plan and implement the NPHS 2011-17.

At its first meeting, the Working Group was welcomed by Prof. Dr. Pietro Vernazza, president of the FCSH. This meeting was dedicated to constitute the Working Group (discussion and approval of its mandate) and to share first impressions on HIV/STI surveillance in Switzerland. Further, the Working Group invited Prof Dr. Francoise Dubois-Arber to present and discuss the outline (tender) "HIV/STI Enhanced Second Generation Surveillance in Switzerland

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1 The fourth main goal of the NPHS specifies that HIV&STI-work should be evidence-based: "The impact of efforts related to HIV and STI is sustained, because it relies on target group participation, is based on scientific evidence and is supported by the population." (FOPH 2010: 78).

2 As the Working Group comprises international experts, the present report is written in English.

3 The scientific team of the Working Group compiled background information for the preparation of these meetings (Frey 2012, Frey/Salamina 2012).

July 2012 - December 2017" (Dubois-Arber et al. 2012). This proposal defines the basic concept for HIV/STI behavioural surveillance in the coming years. The Working Group formulated recommendations on the proposal (included in the minutes of the first meeting) on behalf of the FCSH. Finally, the member of the Working Group discussed the idea of initiating a data triangulation workshop for the Swiss surveillance data analysts and programme managers to improve common data analyses, interpretation and utilization. The Working Group decided to initiate such a workshop and formulated questions to be addressed at such a workshop.

The first data triangulation workshop took place in Bern on the 10th of September 2012 and was co-chaired by the Working Group (represented by Prof. Dr. Daniel Kübler and Prof Dr. Nicola Low) together with the University Institute of Social and Preventive Medicine Lausanne (Prof Dr. Françoise Dubois-Arber). Key actors that collect and analyze HIV/STI surveillance data as well as the main organizations involved in the planning and implementation of the NPHS 2011-17 were represented at the workshop; in total 17 participants attended the workshop (including the chairs, scientific collaborators of the Working Group). The half-day workshop comprised short presentations on current developments and discussions on the improvements of HIV/STI surveillance as well as the questions formulated by the Working Group.

The second meeting of the Working Group took place on the 30th of October 2012. The morning session was dedicated to discussing issues of biological surveillance and included a hearing with the professionals in charge of HIV/STI surveillance of the FOPH (Andreas Birrer, Head of the Section Notification Systems, Martin Gebhardt, Epidemiology Section, Mirjam Mäusezahl-Feuz, Head of the Epidemiology Section). Roger Staub, Head of the Section Prevention and Promotion of the FOPH, attended the hearing too, and participated in the Working Group's discussion on the idea of a so called 'third generation surveillance' in the afternoon. More precisely, the afternoon session dealt with the feasibility study of an economic evaluation of HIV/STI prevention and was attended by a further guest from the FOPH (Christine Heuer, Section Evaluation and Research).[4] Finally, the Working Group discussed the results of the first Data Triangulation Workshop and formulated the present report. The final draft of the present report was approved by the members of the Working Group via circulation.

1.3 Contents of the first Report of the Surveillance Working Group

The present report is the result of the Working Group's discussions on its two meetings in 2012. The report concentrates on the improvement of the current surveillance system for HIV and other STIs in Switzerland. Additionally, preliminary first insights on the developments of new ideas for surveillance and evaluation are reported too. The report does not contain any evidence-informed recommendations for the improvement of prevention interventions. The Working Group has not yet dealt with this issue but plans to do so in subsequent reports during its current mandate.

The present report is structured as follows: In the next section, the Working Group provides general recommendations for surveillance that aim at improving the overall HIV/STI surveillance system. In sections 3 and 4, the Working Group formulates detailed recommendations for biological and behavioural surveillance. Thereafter, first thoughts on clinical surveillance (section 5) and on innovations in the field of HIV/STI surveillance and evaluation are pre-

[4] The FOPH has commissioned the Department of Political Science of the University of Zürich (Prof. Dr. Daniel Kübler) to conduct this study from August 2012 till Mai 2013.

sented (section 6). The report closes with a summary and the prospective future agenda of the Working Group (section 7).

2 General Recommendations for HIV/STI Surveillance

Switzerland has an established second generation surveillance system for HIV (FOPH 2010; Dubois-Arber et al. 2010, WHO/UNAIDS 2000)[5] and additionally collects surveillance data for Chlamydia, Syphilis and Gonorrhoea. While the FOPH conducts biological surveillance, the Institute of Social and Preventive Medicine (IUMSP) of the University of Lausanne carries out behavioural surveillance. The FOPH commissions the IUMSP to implement behavioural surveillance on the basis of a four-year contract (current contract period 2012-16). Besides these two main actors, other institutions are involved in the collection and analysis of data relevant for HIV/STI surveillance. On the one hand, further actors conduct population surveys that collect data on sexual behaviour (e.g. the Swiss Health Survey carried out by the Swiss Statistical Office,) as well as evaluations of individual prevention interventions. On the other hand, the Swiss HIV Cohort Study (SHCS), an ongoing multi-centre cohort study financed by the Swiss National Science Foundation, collects clinical and behavioural data for individuals already infected with HIV. The SHCS is considered as an important source for clinical data and behavioural information on persons living with HIV.

2a) Sustain the existing HIV/STI surveillance capacity

In Switzerland, the number of reported STI infections has increased in the last decade. Since HIV and other STIs mutually increase their infectivity, the link between these infections is crucial. These infections share the same modes of transmission and partially affect the same population groups. Therefore, the FOPH has formulated for the first time a combined strategy to fight against HIV and other STI: The National Programme for HIV and STI 2011-2017 (FOPH 2010). The Working Group fully supports with this strategic decision and aims to assist the FCSH and the FOPH to improve the evidence base for a combined HIV/STI policy. In this respect, the Working Group emphasizes that it is of particular importance to further adapt the surveillance and evaluation system to match the expanded policy focus.

As a combined strategy for HIV and other STI requires sound surveillance information for these infections, existing surveillance capacities needs to be maintained and cutbacks of resources to be avoided. The Working Group shares the opinion that the existing surveillance system that includes besides HIV the mandatory notification of gonorrhoea, syphilis and chlamydia is appropriate, but needs to be improved and complemented with additional information in a few areas (see detailed recommendations below).

2b) Improve the exchange of information and cooperation between the different actors in the field of surveillance: Strengthen and sustain the efforts of data triangulation

Multiple actors funded by different sources are collecting data and performing analyses that contribute to HIV/STI surveillance in Switzerland. Hence, collaboration and exchange of information not only between data collectors and analysts but also with programme managers

[5] UNAIDS/WHO (2000, 2005) have defined second generation surveillance as the "regular, systematic collection, analysis and interpretation of information for use in tracking and describing changes in the HIV/AIDS epidemic over time. Second generation surveillance for HIV/AIDS also gathers information on risk behaviours, using them to warn of or explain changes in levels of infection."

and prevention specialists are essential for the functioning of the HIV/STI system. Previous reports have pointed out that the collaboration between these actors is unsatisfactory and needs to be strengthened if HIV/STI policy is to be further improved (Rosenbrock et al. 2009, Frey/Kübler 2011).

The Working Group has therefore initiated the holding of an annual data triangulation workshop. This workshop brings together the HIV/STI surveillance data producers and analysts as well as programme managers to cooperate and jointly discuss analyses and results. The Working Group has taken notice of the results from the first data triangulation workshop, held in September in Berne. On the one hand the workshop showed that an information exchange on current surveillance activities is important. On the other hand, the workshop identified deficits of existing HIV/STI surveillance and important areas for data triangulation (e.g. HIV-infected MSM with syphilis and HCV risk, migrants from high prevalence countries). After the workshop, the IUMSP and the SHCS have already started to perform a joint analysis that focus on MSM. So, the organization of such a workshop seems to be a promising instrument to promote information exchange and collaboration within the Swiss HIV/STI surveillance system. Hence, the Working Group decided that data triangulation workshop should be held on an annual basis.

3 Biological Surveillance[6]

The Surveillance Working Group shares the opinion that biological (first generation) surveillance should form the basis of surveillance for HIV and STI in Switzerland. Therefore, it is of particular importance for biological surveillance to be of high quality and to cover all relevant public health aspects of HIV and other STI.

Biological surveillance is carried out by the FOPH and consists of the collection of data on positive test results for HIV, syphilis, gonorrhoea, chlamydia, which the laboratories are obliged to report. These laboratory test results are supplemented by clinical information about HIV, syphilis and gonorrhoea cases, which physicians are obliged to notify to the cantonal health authorities (Cantonal Chief Medical Officers). Cantonal Chief Medical Officers transmit the information to the FOPH. The Working Group shares the opinion that existing notification systems for HIV and other STI constitutes the minimum required to track changes in the epidemiology of these infections. Existing capacities within the FOPH as well as within the cantonal health authorities need to be sustained.

3a) Improve data quality (notification compliance)

Based on the documentation received prior to its meetings and the information presented during its hearing with the FOPH, the Working Group acknowledged that there are well-known problems with respect to the completeness of supplementary notifications that physicians are obliged to fill in:

- A considerable number of supplementary notifications are not returned in the case of syphilis and HIV (15-20%) (FOHP 2012).
- There are substantial notification delays, particularly for syphilis.

[6] We use the term "biological" for surveillance information based on laboratory and clinical data in accordance with terminology used by UNAIDS/WHO (2000, 2005).

- Important information is missing on the supplementary notifications in a substantial number of cases. This is a general problem of the Swiss notification system for transmittable diseases (see von Stokar et al 2012), but it particularly affects the accuracy of basic data about confirmed syphilis cases. Clinical information is essential for the interpretation of laboratory tests and for distinguishing infectious from non-infectious cases (FOPH 2012). In 2011, only 45% of notified syphilis cases were confirmed due to missing or contradictory clinical information and notification delays (Mäusezahl/Morán Cadenas 2012).
- In the case of HIV, the quality of the data on comorbidity of HIV and other STIs as well as on drug resistance is of major concerns.

Solutions to improve the quality of data should take into account structural as well as behavioural components. Existing notification procedures are rather complicated and should be simplified (e.g. long and confusing notification forms). The awareness of physicians about their duty of notification seems to be insufficient and should be enhanced with adequate tools (e.g. providing easy access to technical assistance and expertise of STI diagnostics and treatment).

In general terms, the Working Group shares the opinion that it is preferable to have data on fewer items if the quality of data can be ensured for more cases. The supplementary notification forms should be reviewed and revised to include only clinical, demographic and behavioural data that are essential for understanding STI transmission patterns in HIV-positive and HIV-negative populations.

The Working Group suggests that the FCSH convenes a crosscutting task force that involves members of the Working Groups "Clinic and treatment", "Laboratory and Diagnostics" as well as "Surveillance". The FOPH as well as cantonal health authorities and physicians should be involved in the revision. A revision of the notification forms should take into account the dis-/incentives of the physicians to fill in the forms. The forms should be closely linked to questions of diagnoses.

The revision of the form for ***syphilis*** notification should be prioritised, but the notification of HIV and gonorrhoea should be simplified too.

3b) Collect information on the number of tests performed (denominators)

The Working group acknowledges that there is information collected on the testing behaviour of the general population and of particular target groups in the case of HIV (Jeannin et al. 2010). Information on STI testing behaviour is more limited.[7] The total number of tests performed is not available for any of those infections and the overall trends in the uptake of HIV/STI testing cannot be examined exactly in Switzerland. Therefore it is difficult to interpret the trends of HIV/STI epidemics in Switzerland.

Information about the number of tests is particularly important for chlamydia. Chlamydia infections are the most frequently diagnosed bacterial STI in Switzerland. Chlamydia infections are usually asymptomatic. The number of chlamydia infections has continuously increased in the last decade. In 2011, the FOPH reported 7203 confirmed cases (FOPH 2012: 20). Without information on the total number of tests performed, it is not possible to determine whether the increase is the result of increased testing or increased transmission.

[7] The Gay Survey and the Swiss HIV Cohort Study provide data on syphilis, gonorrhoea and chlamydia testing behaviour. Few studies provide information on the total number of test performed within individual cantons e.g. for chlamydia (FOPH 2012: 20-21).

The Working Group recommends that data be collected from laboratories to allow the proportion of positive tests for HIV and STI to be calculated according to age and sex. Ideally, this denominator data is collected for HIV and all other STI that are included in the Swiss notification system. Anticipating limited resources for surveillance the Working Group agrees that the collection of the total number of tests performed (broken down by gender and age) for ***chlamydia*** is an absolute necessity.

3c) Gonorrhoea surveillance: Introduce an antibiotic resistance monitoring

The Working Group acknowledges that the spread of antibiotic resistant *N. gonorrhoeae* is a global health concern. There is a considerable threat that gonorrhoea is becoming difficult to treat and might become untreatable in the foreseeable future. Treatment failures with cephalosporins (the last available class of drugs) are now emerging. The reported number of cases of gonorrhoea in Switzerland continues to increase. The use of nucleic acid amplification tests for gonorrhoea diagnosis is also increasing, but antibiotic resistance testing cannot be carried out on these specimens. Therefore it is critical to monitor gonococcal antibiotic resistance and clinical treatment failures. In Switzerland, some data about gonococcal antimicrobial resistance are available, e.g. national antibiotic resistance monitoring project (www.anresis.ch) and dermatovenereology clinics and their associated laboratories, but these are not established within routine STI surveillance.

The Working Group recommends that antibiotic resistance monitoring for gonorrhoea be introduced into the STI notification system. The system should include detailed information on minimum inhibitory concentrations and breakpoints for key antibiotic classes and should follow international guidelines for quality assurance. The system should cover important risk groups and collect sufficient demographic and behavioural information (particularly sexual orientation) to allow targeting of interventions. The Working Group suggests that the FOPH works together with expert clinicians and microbiologists (including those in the FCSH) to establish a system.

3d) HIV surveillance: Strengthen the utilization of complementary data sources

The Working Group shares the opinion that the utilization of complementary data sources for the purpose of HIV surveillance should be strengthened. An analysis of the data that the FOPH collects with BerDA (Advisory guidelines and data management system for VCT centres) offers the possibility to obtain complementary insights on testing and risk behaviour of people requesting an HIV test in a VCT centre. Further, an increased integration of data collected by the Swiss HIV Cohort Study could provide valuable information e.g. on comorbidity of HIV and other STI or on the causes of death of HIV-infected persons or (see also section 5).

3e) Generate better prevalence data

Information on the prevalence of HIV and other STI is important to assess the health status of the Swiss population and to plan and implement HIV/STI policy. Currently, no precise data is available for their incidence (see also recommendation 3b) and prevalence in the general population or specific target groups. The Surveillance Working Group recommends to generate better prevalence data (estimates) for HIV and other STI in the Swiss population (cf. Rosenbrock et al. 2009). The FOPH should push for better prevalence estimates and support complementary data collection for this purpose.

3f) Strengthen the dissemination of information from biological surveillance of HIV and other STI

The FOPH is currently changing its reporting activities in favour of a combined reporting on HIV and other STI (FOPH 2012). According to the FOPH, details of future reporting and dissemination are not yet determined. The Working Group appreciates that reporting of HIV and other STI is combined. It emphasizes the importance of the dissemination of biological HIV/STI surveillance data itself but also of information on its quality. Adequate and regular dissemination could contribute to raise the awareness and commitment of professionals working in this field (e.g. physicians, laboratories, cantonal health authorities, prevention specialists).

The Working Group appreciated the presentations of the FOPH during the hearing and was particularly impressed by the maps presented by Andreas Birrer displaying the geographical patterns of the epidemics. This is an excellent visualization and presentation of biological surveillance data to show that Swiss regions are affected to different degrees by HIV and STI. The Working Group recommends using this tool to disseminate biological surveillance information and to further develop such visualizations (e.g. maps that break down the data by transmission ways).

Finally, the Working Group shares the opinion that the issue of the linkages between different surveillance registers (e.g. tuberculosis, hepatitis B and C) is important from a public health point of view. However, the Working Group has not yet discussed this matter in details but will take it up in upcoming meetings.

4 Behavioural Surveillance

Behavioural surveillance is implemented in Switzerland mainly by the IUMSP on behalf of the FOPH. It comprises regularly repeated surveys among the general population and target groups with a higher risk for HIV infection as well as continuous monitoring of annual condom sales and syringe distribution. The Surveillance Working Group discussed the outline of the IUMSP “HIV/STI enhanced second generation surveillance in Switzerland. July 2012 – December 2017” (Françoise Dubois-Arber et al. 2012) for the current four-year period. In general, The Working Group appreciates this outline that sketches out a sophisticated system of behavioural surveillance data collection and analysis. Detailed comments and recommendations on the outline are reported in the minutes of the first meeting of the Working Group. In the following, the Working Group emphasizes the main areas for improvements.

4a) Strengthen the analysis on predictors of risk behaviour

In order to improve primary prevention, access to testing and treatment and its quality, it is important to know the relevant predictors for (sexual) risk taking. The Working Group emphasizes that it is essential to orient behavioural surveillance on the following key questions: How and under which social and individual conditions does risk behaviour develop in various at-risk populations? The Working Group acknowledges that the IUMSP is pushing to increase such knowledge and shares the opinion that these research efforts should be further intensified.

4b) Improve behavioural surveillance for migrants

In Switzerland, HIV infections among heterosexuals involve frequently migrants from countries with a high HIV prevalence (e.g. Sub-Saharan Africa). There is no doubt that migrants have been and will continue to be an important group to collect surveillance information on (cf. Rosenbrock et al. 2009). The Working Group recognized that up-to-date behavioural data for this group is largely missing and therefore appreciates the efforts to close this gap taken by the IUMSP (Dubois-Arber et al. 2012).

The Working Group acknowledges that it is difficult to recruit migrants for research and obtain data on their sexual behaviour. It recommends following a broad approach and using multiple points of access to this target group instead of concentrating on university obstetrics and gynaecology outpatient clinics only. Family planning centres and specialized VCT centres should be considered, too, with the aim to obtain meaningful data on the sexual behaviour of the concerned migrant population.

Finally, the Working Group emphasizes the need to collect information on the antenatal screening for syphilis, hepatitis B as well as for HIV within behavioural surveillance for migrants.

4c) Strengthen behaviour surveillance in the field of sex work

In Switzerland, there is a lack of data concerning the behaviour of sex workers and their general health conditions (vulnerability), including injecting drug use (cf. Rosenbrock et al. 2009, Dubois-Arber et al. 2012). The discussion on the first data triangulation workshop showed that prevention specialists require data on sex workers but also on sex work clients. It was criticised that the Swiss Health Survey that is currently conducted including a module on sexual health has deleted off the question on "paid sex". Further, it was pointed out that surveillance data should also provide insights on how migrants from Eastern Europe are represented in this vulnerable group. The Working Group recommends that behavioural surveillance in the field of sex work should be strengthened.

4d) Behavioural surveillance (IUMSP) should take an active part in data triangulation

The Surveillance Working Group appreciates that the IUMSP co-chairs the data triangulation workshops together with the Surveillance Working Group. The IUMSP has currently intensified its information exchange and cooperation, e.g. with data analysts from SHCS. The Working Group shares the opinion that it is of particular importance to better exploit the potential of existing surveillance data for the improvement of the HIV/STI policy. Efforts of greater cooperation and common analysis within the surveillance system expand existing practice of data interpretation and thus, should provide additional insights e.g. on risk-taking in at-risk population. Thus, the Working Group recommends that the IUMSP should continue to actively engage in data triangulation efforts.

5 Clinical information on HIV/STI

While the Swiss HIV Cohort Study (SHCS) holds a very comprehensive database for the purpose of clinical research on HIV, clinical research on other STI is more fragmented and dispersed. Thus, compared to HIV, evidence on the quality of diagnostics and treatment of syphilis, gonorrhoea and chlamydia in Switzerland is rather scarce.

5a) Swiss HIV Cohort Study (SHCS) should contribute to HIV surveillance

The Working Group acknowledges the international reputation of the SHCS and its important contributions to clinically relevant questions concerning the treatment of HIV-infected patients. The SHCS is the core element for an evidence-based treatment and thereby contributes to maintain and improve the high standard of treating HIV-infected patients in Switzerland. Therefore, the Working Group recommends sustaining the research activities of the SHCS

Additionally, it emphasizes that there is a great potential of the SHCS to contribute to HIV surveillance with (clinical) information on HIV-infected persons. The participants of the first data triangulation workshop share this impression.

At the moment, only behavioural data of the SHCS is regularly integrated in the surveillance analysis and reporting on HIV (e.g. Jeannin et al. 2010). The Working Group recommends that clinical data of the SHCS be used for clinical surveillance for HIV. For instance, the SHCS could provide information on the comorbidity of HIV and other STI (e.g. Turnheer et al. 2010, Wandeler et al. 2012), on the causes of death of HIV-infected persons (Weber et al. 2012) or on the drug-resistance in HIV.

The Working Group welcomes the current activities to triangulate behavioural surveillance data with data from the SHCS (see also recommendation 2b, 4d).

The FOPH has recently suggested the SHCS and the funding body, the Swiss National Science Foundation, to investigate the aging problems of HIV-patients as well as issues of public health in the next funding period.

The Surveillance Working Group shares the opinion that the SHCS should use its potential to provide information on contextual factors of risk behaviour and more generally integrate social science research (see also Rosenbrock et al. 2009). The SHCS could provide valuable information for positive prevention.

5b) Generate systematic information on the representativeness of the SHCS database

A substantial proportion of HIV positive people living in Switzerland are registered in the SHCS.[8] However, there is no precise information on the representativeness of the participating group available. The first data triangulation workshop highlighted that this issue is a relevant matter of concern for surveillance data analysts. Precise information on the representativeness of the SHCS would strengthen the utility of this data for the purpose of surveillance. In this sense, the Working Group welcomes and supports the suggestions made by the FOPH to assess the representativeness of the SHCS as well as the reasons of non-participation in the SHCS.

The Surveillance Working Group shares the opinion that biological surveillance data and SHCS data should be systematically matched (retrospective and/or new cases). New ways to manage this interface should be assessed as past efforts were not successful.

[8] 52% of HIV positive cases since 1985 ever registered in the SHCS; 68% Aids cases ever registered in the SHCS since 1983 (www.shcs.ch November 2012).

6 Innovation in HIV/STI Surveillance and Evaluation

The Surveillance Working Group has started to discuss two areas of innovations, namely molecular epidemiology and the idea of "third generation surveillance".

6a) Molecular epidemiology

The Working Group acknowledges that molecular epidemiology can contribute to STI/HIV surveillance, e.g. genotyping to detect antimicrobial resistance mutations in HIV and N. gonorrhoeae. The value of molecular epidemiology is enhanced when combined with social science research on the context and sexual histories. HIV resistance monitoring is performed routinely in the SHCS but is not part of the routine Swiss STI notification system. Many other molecular biological methods are in use as research tools. More research is needed to clarify its contribution to surveillance, prevention, testing and treatment of HIV and other STI. The members of the Surveillance Working Group share the opinion that the Research Working Group of the FCSH should take primary responsibility for this area and seek cooperation with the Surveillance Working Group to discuss the issues related to surveillance.

6b) Third generation surveillance (effectiveness and efficiency information)

The idea of 'third generation surveillance' is put forward in the NPHS 2011-2017 (FOPH 2010). It aims to contribute to an evidence-based HIV and STI prevention policy by considering not only biological and behavioural surveillance data but also evidence about the effectiveness and efficiency of public health interventions. While first generation surveillance comprises biological data on infections and second generation surveillance adds behavioural data, third generation surveillance analyses data on the link between policy, epidemiology and behaviour (with respect to HIV/STI transmission). Third generation surveillance emphasizes the importance of information on the effectiveness and efficiency of policy measures.

The Working Group acknowledges that policy-makers in Switzerland want to advance this type of information in order to make strategic decisions about resources. The members of the Working Group agreed that this is an interesting idea and an area of innovation that provokes important questions not only in the field of HIV/STI but more generally with respect to evidence-based policy-making. The discussions showed that the generation of such information is a challenging task and there are serious concerns whether effectiveness and efficiency can be measured in an adequate way (see below). The Working Group agreed that developing the idea of third generation surveillance should be explored.

The FOPH asked for advice on the realization of a feasibility study of an economic evaluation in the field of HIV and STI prevention. The Working Group has discussed the concept of this feasibility study. It emphasizes the challenges to grasp (conceptualize) both the resources dedicated to HIV/STI prevention as well as the consequences of HIV/STI prevention. On the one hand, the Working Group members are particularly concerned with the limitations and normative implications that are associated with a monetization of prevention effects. On the other hand, they emphasized that various contextual factors can influence resource allocations and the effectiveness of prevention interventions and therefore must be taken into account. The Working Group agrees to advance the idea of third generation surveillance further and is looking forward to discuss the result of the feasibility study of an economic evaluation of HIV/STI prevention.

7 Summary and prospects

The Surveillance Working Group emphasizes that surveillance should be adapted to meet the challenges of a combined HIV and STI strategy as defined by the NPHS 2011-2017. Based on the scientific background information provided by the research team of the University of Zurich (Frey 2012, Frey/Salamina 2012), its discussions, the hearings with actors from the IUMSP and the FOPH as well as the first data triangulation workshop, the members of the Working Group consider that it is important to maintain existing capacities for surveillance of HIV and other STI. It is necessary to improve the quality of biological surveillance data and its analysis. The Working Group emphasizes the importance of accurate clinical information in syphilis as this information is essential for the interpretation of laboratory tests and for distinguishing infectious from non-infectious cases. A few new elements should be introduced such as the collection of the total number of chlamydia tests performed and an antibiotic resistance monitoring for gonorrhoea. With respect to behavioural surveillance, the investigation of predictors for risk behaviour should enjoy priority. The field of migrants and sex work are the main areas to strengthen. The data from the Swiss HIV Cohort Study should be used more for the purpose of HIV surveillance. While the Working Group agreed to further advance the idea of "third generation surveillance", it decided not to delve into molecular epidemiology at this point.

Overview: Recommendations of the Surveillance Working Group

General recommendations for HIV/STI surveillance

2a) Sustain the existing HIV/STI surveillance capacity

2b) Improve the exchange of information and cooperation between the different actors in the field of surveillance: Strengthen and sustain the efforts of data triangulation

Recommendations for biological surveillance

3a) Improve data quality (notification compliance)

3b) Collect information on the number of tests performed (denominators)

3c) Gonorrhoea surveillance: Introduce an antibiotic resistance monitoring

3d) HIV surveillance: Strengthen the utilization of complementary data sources

3e) Generate better prevalence data

3f) Strengthen the dissemination of information from biological surveillance of HIV and other STI

Recommendations for behavioural surveillance

4a) Strengthen the analysis on predictors of risk behaviour

4b) Improve behavioural surveillance for migrants

4c) Strengthen behaviour surveillance in the field of sex work

4d) Behavioural surveillance (IUMSP) should take an active part in data triangulation

Recommendations for clinical surveillance

5a) Swiss HIV Cohort Study (SHCS) should contribute to HIV surveillance

5b) Generate systematic information on the representativeness of the SHCS database

The Surveillance Group is looking forward to continue its work to assess and promote quality and innovation in the field of HIV and STI surveillance and evaluation. It is eager for discussion the reception of its report by the FHCS/FOPH and related actions. Further, it plans to meet next in spring 2013 to discuss newest trends and developments in the field of HIV and STI surveillance as well as the results of the feasibility study.

8 References

Dubois-Arber, Françoise, André Jeannin, Brenda Spencer, Jean-Pierre Gervasoni, Bertrand Graz, Jonathan Elford, Vivian Hope, France Lert, Helen Ward, Mary Haour-Knipe, Nicola Low, Marita van de Laar (2010): Mapping HIV/STI behavioural surveillance in Europe. *BMC Infectious Diseases*, 10:290.

Dubois-Arber Françoise, André Jeannin, Stéphanie Lociciro, Raphael Bize, Brenda Spencer, Jean-Pierre Gervasoni (2012): *HIV/STI enhanced second generation surveillance in Switzerland July 2012 – June 2016.* Proposal 25.5.2012 (modified 5.6.2012). Lausanne: Institut universitaire de médecine sociale et préventive.

FOPH Federal Office of Public Health (2010): *National Programme on HIV and other STI (NPHS) 2011-2017.* Bern: FOPH.

FOPH Federal Office of Public Health (2012): *HIV und andere sexuell übertragbare Krankheiten: Epidemiologischer Überblick 2007-2011. Oktober 2012.* Bern: FOPH.

Frey, Kathrin und Daniel Kübler (2011): *Evidenzbasierte HIV&STI-Politik in der Schweiz. Empfehlungen zur Einberufung eines Fachgremiums "Third Generation Surveillance" (Auftrag, Strukturen und Ressourcen). Expertise zuhanden des Bundesamtes für Gesundheit.* Horgen: Syntagma GmbH. Unveröffentlichter Bericht.

Frey, Kathrin (2012): *Swiss HIV/STI Surveillance, Situation in 2011.* Background Information for the first Meeting of the Expert Panel on "HIV&STI Surveillance 2012-2015". Unpublished, working document. Zurich, Department of Political Science.

Frey, Kathrin and Amanda Salamina (2012): *Swiss HIV/STI Surveillance.* Background Information for the 2nd Meeting of the Working Group on "HIV&STI Surveillance 2012-2015". Unpublished, working document. Zurich, Department of Political Science.

Jeannin, André, Giovanna Meystre-Agustoni, Stéphanie Lociciro und Françoise Dubois-Arber (2010): *Monitoring der Schweizer Präventionsstrategie gegen HIV/Aids. Synthese Bericht 2004-2008.* (Raisons de santé, 155b). Lausanne: Institut universitaire de médecine sociale et préventive.

Mäusezahl, Mirjam and Francisca Morán Cadenas (2012): *Surveillance biologique des IST.* Presentation at the 1st data triangulation workshop, 10.9.2012, Bern.

Rosenbrock, Rolf, Calle Almedal, Jonathan Elford, Daniel Kübler, France Lert und Srdan Matic in collaboration with Larissa Plüss, Kathrin Frey and Axel J. Schmidt (2009): *Review of the Swiss HIV Policy by a Panel of International Experts.* Study on behalf of the Swiss Federal Office of Public Health. Horgen: Syntagma GmbH.

Thurnheer M.C., R. Weber, L. Toutous-Trellu, M. Cavassini, L. Elzi, P. Schmid, E. Bernasconi, A. B. Christen, M. Zwahlen, H. Furrer; Swiss HIV Cohort Study (2010): Occurrence, risk factors, diagnosis and treatment of syphilis in the prospective observational Swiss HIV Cohort Study. *AIDS*, 24(12): 1907-16.

UNAIDS/WHO Working Group on Global HIV/AIDS and STD Surveillance (2005): *The pre-surveillance assessment: guidelines for planning serosurveillance of HIV, prevalence of sexually transmitted infections and the behavioural components of second generation surveillance of HIV.* Geneva: WHO, UNAIDS and Family Health International.

UNAIDS/WHO Working Group on Global HIV/AIDS and STI Surveillance (2000): Guidelines for second generation HIV surveillance. Geneva: UNAIDS/WHO.

Von Stokar, Thomas, Anna Vettori and Juliane Fliedner (2012): *Evaluation des obligatorischen Meldesystems übertragbarer Krankheiten. Schlussbericht.* Zürich: INFRAS.

Wandeler G., T. Gsponer, A. Bregenzer, H.F. Günthard, O. Clerc, A. Calmy, M. Stöckle, E. Bernasconi, H. Furrer, A. Rauch; and the Swiss HIV Cohort Study. (2012). Hepatitis C Virus Infections in the Swiss HIV Cohort Study: A Rapidly Evolving Epidemic. *Clin Infect Dis*. Sep 12 2012 [Epub ahead of print].

Weber, R., M. Ruppik, M. Rickenbach, A. Spoerri, H. Furrer, M. Battegay, M. Cavassini, A. Calmy, E. Bernasconi, P. Schmid, M. Flepp, J Kowalska, B Ledergerber and the Swiss Cohort Study (2012): Decreasing mortality and changing patterns of causes of death in the Swiss HIV Cohort Study. *HIV Medicine*, Sep 24 2012.